

Stormwater Pollution Prevention

City of Abilene Stormwater Protection Practices

2020



This training is brought to you by...

City of Abilene Stormwater Management's Public Education & Outreach Program



Clean Water. Healthy Life

Abilene's Stormwater Division is tasked with...

- ◆ Provide direct one-on-one technical assistance
- ◆ Provide a cost-effective outreach strategy
- ◆ Help operations and businesses comply rather than face fines

What is Stormwater?

Stormwater is runoff from rain and snowmelt flows over urban surfaces and carries pollutants to the **nearest stream**



Where does that drain go?

In Abilene, storm drains discharge directly to waterways without filtration or treatment



Would you pour this into Catclaw or Elm Creek?

Why is Protecting Stormwater Necessary?

Pollutants can impair aquatic ecosystems and impact drinking water sources



Illegal Discharges

Local Ordinances Prohibit...

- Discharges of any material into the storm drainage system or watercourse other than stormwater
- Construction, use, or maintenance of an illicit connection
- Materials deposited in such a manner or location as to constitute a threatened discharge

Ordinances can be found on abilenestormwater.com

Illegal Discharges

Potential Water Quality Violations

- Poorly maintained dumpster and loading dock areas
- Cleaning of buildings, sidewalks, patios
- Spills
- Maintenance of cooling and refrigeration equipment
- Landscaping and grounds keeping
- Illicit connections to storm systems

An illicit discharge is any discharge to the storm drainage system that is not composed entirely of stormwater or snowmelt

Facility Management

Potential Pollution Sources and Best Management Practices (BMPs)

The Good, the Bad and the Ugly

Facility Management

Facility Managers are responsible for ensuring that all activities are conducted in a manner protective of the environment

Facility Management

Areas needing attention include...

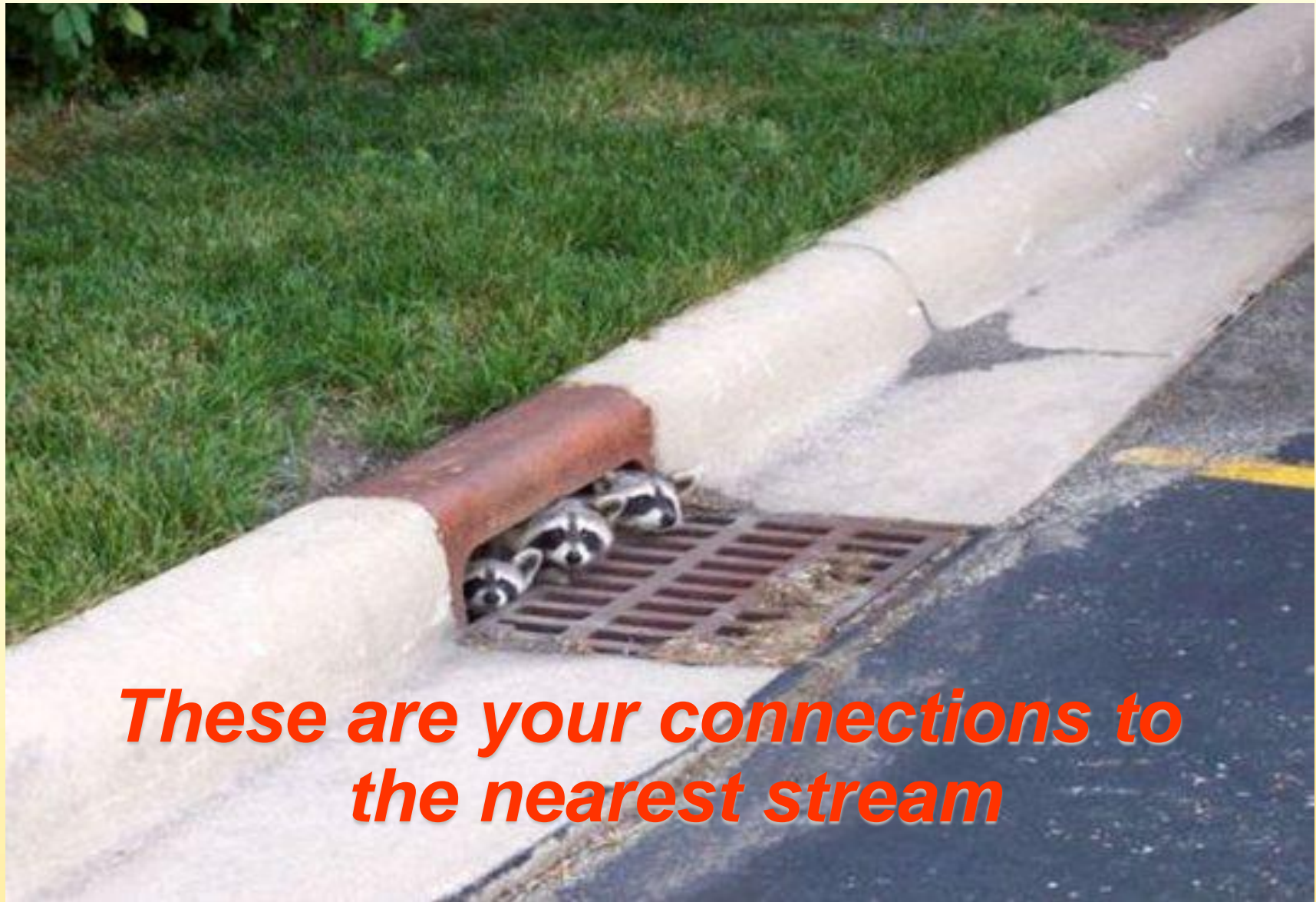
- Dumpsters and loading docks
- HVAC equipment maintenance
- Grounds keeping
- Spill response
- Fire suppression systems

Facility Management

Areas needing attention include...

- Storm drain system cleaning
- Permanent storm drainage system BMPs
- Parking lots and surfaces
- Contractors
- Surface cleaning

Locate Your Storm Drains



***These are your connections to
the nearest stream***

Dumpster Areas

- Containers must be covered at all times
- Do not allow containers to overflow
- Contact your service provider immediately if your containers leak or do not have lids

Dumpster Areas

Good!

- ✓ **Covered containers**
- ✓ **No liquid wastes**



Dumpster Areas

Bad!



Dumpster Areas

Ugly!



HVAC Maintenance

- Direct discharges such as cooling tower and boiler blow down to sanitary sewer
- Cover mechanical equipment and provide containment - especially during maintenance
- Discharge of air conditioner condensate is allowed

HVAC Maintenance

Good!
It's covered



Bad!
No containment

Grounds Keeping

- Maintain sprinkler systems to prevent leaks and over-watering
- Reduce use of pesticides and fertilizers and do not apply when rain is forecast
- Keep fertilizer and grass clippings off of paved surfaces
- Properly store equipment, fuels and other materials

Grounds Keeping

- Wash equipment on a pervious areas such as lawns
- Maintain a buffer strip of natural vegetation around waterways and ponds
- Apply de-icing products sparingly
 - focus on high use areas and slopes where traction is critical and sweep-up excess once surfaces are dry

Grounds Keeping

Good!

- ✓ **Equipment stored upright to prevent fuel leaks**



Grounds Keeping

Bad!



Spill Response

Be Prepared!

- Create a Spill Response Plan
- Train employees
- Keep a stocked spill kit readily accessible

Spill Response

Prompt Spill Clean Up

- Control the source
- Contain spill
- Absorb material



Spill Response

Report Spills that Travel Offsite

- **Local** - 911
- **State** – Texas Commission on Environmental Quality 24 hour hotline - 1-800-832-8224

Fire Suppression Systems

- Direct water from system testing...
 - to sanitary sewer,
 - to landscaping,
 - or recover runoff before it reaches the storm drain



Storm Drain Systems

- Perform regular maintenance
- Keep storm drains free of litter and debris
- Do not divert grass clippings or leaves into storm drains



Storm Drainage BMPs

- Inspect BMP structures using *Urban Drainage and Flood Control* checklists
- Keep BMP structures free of litter and debris
- Perform regular maintenance



Storm Drainage BMPs

BMP Inspection Checklists

- Irrigated grass buffer strips
- Grass-lined swale
- Modular block porous pavement
- Porous pavement detention
- Constructed wetland channel
- Extended detention basin
- Sand filter extended detention basin
- Constructed wetland basin
- Retention pond basin
- Porous landscape detention

*More information on BMPs can be found at
www.abilenetx.gov/stormwater*

Parking Lots

- Clean up automotive fluids, spills, litter, and landscape waste before they enter the storm drain system
- Sweep parking lots frequently - at least weekly
- Mark storm drain inlets with "No Dumping, Drains to Creek" message



Surface Cleaning

If cleaning with water and detergent is needed...

- Use a mobile washing unit that is self-contained
- **Do not** allow wash water (soapy or not) to discharge to the storm drain system



Contractors

Property and business owners are responsible for their contractors' practices

Contract language to consider...

“The Contractor shall take all measures necessary to prevent pollutants from entering storm drains of watercourses. For the purpose of eliminating stormwater pollution, the contractor shall implement effective Best Management Practices (BMPs). BMPs include general good housekeeping practices, appropriate scheduling of activities, operational practices, maintenance procedures and other measures to prevent the discharge of pollutants directly or indirectly to the storm drain system. These BMPs shall be maintained for the duration of the Contractor's work. The Contractor shall also be responsible for proper disposal of all waste materials, including wastes generated by the implementation of BMPs.”

(The above is a suggestion and does not take the place of good legal advice or assistance. Please seek counsel from a legal professional.)

Contractors can go to www.abilenestormwater.com for the applicable BMPs

Surface Cleaning

- Wash water may **NOT** be discharged to storm drains
- **IF** you do not use any chemicals
AND are only cleaning surfaces of ambient dirt,
THEN you may direct the wash water to nearby
landscaping **OR** contain it onsite and allow it to
evaporate
- **IF NOT**, wash water must be collected and
discharged to the sanitary sewer

Surface Cleaning

Steps for Proper Surface Cleaning...

- Use dry clean up methods first
- Locate storm drains
- Determine where water will pool for collection
- Protect storm drains and collect wash water
- Dispose of water properly
 - Sanitary sewer drain at the job site or contractor's place of business
 - Check with wastewater treatment plant

Surface Cleaning

Good!



Surface Cleaning

Bad!



Allowed Discharges

Discharges of water from these sources and activities may be allowed...

- Water line flushing
- Landscape irrigation
- HVAC coil cleaning
- Air conditioning condensate
- Street sweeping
- Potable water sources
- Residential car washing
- Diverted stream flows
- Uncontaminated groundwater
- Natural Springs
- Wetlands flows
- De-chlorinated swimming pools
- Foundation drains and crawl spaces

A State Permit may be required for discharge

http://www.tceq.texas.gov/permitting/wastewater/industrial/TPDES_industrial_wastewater_steps.html

Keep It Clean!

Community members are the principal stewards of our water quality!

And as Abby says...

Keep Our Lakes Clean 'Cause clean water means a healthy life!'

Keep It Clean!

**The COAST (City of Abilene
Stormwater Team) can help!**

Call for a site visit review or assistance
with facility questions or concerns.

325-437-4937